CZECHOSLOVAKIA

A. TEXL, Department of Pharmacology of the Medical Faculty of the J.E. Purkyne University (Farmakologicky ustav lekarske fakulty University J.E. Purkyne) Head (prednosta) J. SAJNER, MD, CSc; Brno.

"Effect of the Tea-Leaf Catechin Complex on Experimental Inflammation."

Prague, Casopis Lekaru Ceskych, Vol 102, No 19, 10 May 63; pp 515-519.

Abstract [English summary modified]: A Soviet-prepared tea tannin complex when administered s.c. or p.o. at 100 mg /Kg along with 100 mg /Kg of ascorbic acid, significantly depressed hyaluronidase, cotton pellet, formalin or serotonin granuloma in rats. Tannin with vitamin C also significantly increased urinary 17-ketosteroids. Tannin alone had no effect. Eight graphs; 9 Western, 3 Soviet and 7 Czech references.

1/1

TEXL, Arnost

Effect of tannin on the activity of the uterus. Scr. med. fac. med. Brunènsis 34 no.5:199-207 '61.

(UTERUS pharmacol) (TANNINS pharmacol)

TEXL, A.; PROCHAZKOVA-FRANKOVA, H.; TAMM, J.

Effect of tannin on hemorrhage and Quick's prothrombin time.
Scr. med. fac. med. Brunensis 36 no.5:249-257 '63.

1. Farmakologicky ustav lekarske fakulty university J.E. Purkyne v Brne. Vedouci: MUDr. Josef Sajner, C.Sc.
(TANNINS) (PROTHROMBIN TIME) (HEMORRHAGE)
(INJECTIONS, INTRAVENOUS)
(INJECTIONS, SUBCUTANEOUS)

L 13206-66

ACC NR: AP6006094 SOURCE CODE: CZ/0053/65/014/004/0317/0318

AUTHOR: Texl, A.

ORG: Medical Faculty, Institute of Pharmacology, J. E. Purkyne University, Brno (Farmakologicky ustav lek. fak. university J. Ev. Purkyne)

TITLE: Mechanism of anti-inflammatory effect of tannin [This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 26 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 317-318

TOPIC TAGS: mouse, endocrinology, gland, carbohydrate, pharmacology, drug effect

ABSTRACT: Study in hypophysectomized and adrenomedulectomized mice with sterile experimental granulomas indicates that the antiexudative effect of tannin requires the presence of adrenal medulla and that its proliferative effect requires activation of the pituitary-adrenal axix. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 005

jrn

Card 1/1

CZECHOSLOVAKIA

TEXL, A.; KONECNY, M.; Pharmacological Institute and Chair of Radiology and Nuclear Medicine, Medical Faculty, J. Ev. Purkyne University (Farmakologicky Ustav a Katedra Radiologie a Nuklearni Mediciny Lek. Fak. UJEvP), Brno.

"On the Hepatotoxic Effect of Acidum Tannicum."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 5, Sep 66, p 410

Abstract: The influence of tannic acid on the functioning of the liver was investigated with respect both to the dose and the manner in which it was administered. Experiments on rabbits showed that 500 mg/kg of tannin impaired the functioning of the liver after 1 and 2 days. Lower amounts of tannin did not have any effect. Amounts of 500 and 100 mg/kg resulted in a decrease in the glycogen content of the liver, reduction of the fat content, and ultimately in a parenchymal degeneration. 6 Western references. Submitted at 14 Days of Pharmacology at Smolenice, 16 Feb 66.

1/1

TEXL, K., inz.

The role of the Czechoslovak Scientific Technical Society in introducing new techniques. Energetika Cz 11 no.1:Suppl: Energetika 11 no.1:4 '61.

TEXL, Karel, inz.; KRENEK, Josef, inz.; BAYER, Vilem, inz.; PACAK, Slavoj, inz.; VYSKOCIL, Vaclav, inz.

The 1964 Meeting of the International Conference on Large Electric Systems. Energetika Cz 14 no.12:622-644 D '64.

TEXL, Karel, inz.

In the path of best workers. Energetika Cz 13 no.7:341-342 JL '63.

1. Predseda, Ustredni vybor Ceskoslovenske vedecko-technicke apoleanosti, sekce pro energetiku.

Textor, Dora

COUNTRY : Rumania
CATEGORY : Meadow Cultivation. L
ABS. JOUR. : RZhBiol., No. 1959, No. 15520
AUTHOR : Obrejanu, Gr.; Negus, N.; Velea, C.; Maxim, I.;
INST. : Cenrda, St.; Beamurita, I.; Textor, Dora;
TITLE : Cluj Affiliate, AS RPR
Increased Fertility in ..atural Meadows of ..estern ..ountains (Rumania).
ORIG. PUB. : Studii si cercetari veron. Acad. RPR Fil. Cluj, 1957, 8, No.1-2, 99-116
ABSTRACT : No abstract.

1/1
CARD: *Dragan, Viorica

TEXTER, D.

Juniperus in subalpine meadows. P. 90 NATURA Bucuresti
Vol. 7, no. 3, May/June 1955

SOURCE: EEAL LC Vol. 5, no. 7, July 1956

TEXTER, D.

Juniperus in subalpine meadows. p. 90. NATURA. Bucuresti. Vol. 7, no. 3, May/June 1955.

SOURCE: East European Accessions List (EEAL) Library of Congress Vol. 5, No. 7, July 1956.

TEYDER, V.

Metal conveyer for freezing meat dumplings. Mias. ind. SSSR 32 no.1:10-11 '61. (MIRA 14:7)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti.
(Leningrad--Meat industry--Equipment and supplies)
(Conveying machinery) (Automatic control)

TEYDER, V.A., inzh.

Food freezing on a metal sheet. Khol.tekh. 40 no.3:33-36 My-Je '63.
(MIRA 16:9)
1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti.
(Refrigeration and refrigerating machinery)
(Food,Frozen)

TEYDER, V.A., inzh.

Time needed for the freezing of products laying on a ribbed surface. Khol.tekh. 39 no.6:37-42 N-D '62. (MIRA 15:12)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti.

(Food, Frozen)

TEYDER, V. A.

"Determination of freezing time under variable conditions of heat exchange over body surfaces."

Report presented at the 11th International Congress of Refrigeration, (IRR), Munich, West Germany, 27 Aug-4 Sep 63.

KOZLOV, I.V., dorozhnyy master (stantsiya Kiik Tashkentskoy dorogi); TEYEVIRE, A.V., dorozhnyy master (stantsiya Elva Estonskoy dorogi); PODKLAD, P.I., brigadir puti (stantsiya Perm'); LOGVIN, F.G.; NUKKA, R.Ya.; PUTNIK, N.M., dorozhnyy master (stantsiya Almaznaya Donetskoy dorogi); TIMOFEYEV, S.

Give us an answer. Put' i put. khoz. no.5:41-42 My '58.
(MIRA 13:3)

1.Starshiy dorozhnyy master, stantsiya Beshtau Ordzhonikidzevskoy dorogi (for Logvin). 2. Nachal'nik distantsii, g.Pyarnu (for Nukka). 3.Starshiy dorozhnyy master, stantsiya Karachev Moskovsko-Kiyevskoy dorogi (for Timofeyev).
(Ballast (Railroads))

OL'DEKOP, Yu.A.; BYLINA, G.S.; GRAKOVICH, L.K.; BULOYCHIK, Zh.I.; TEYF, Zh.D.

Acyl peroxides. Part 7: Synthesis of asymmetrical diacyl peroxides of aliphatic and hexahydroaralyphatic series. Zhur. org. khim. 1 no.1:82-86 Ja '65. (MIRA 18:5)

1. Belorusskiy gosudarstvennyy universitet im. V.I.Lenina.

TEYFEL', V. (g.Shcherbakov).

Anomalous distribution of the aurora polaris. Astron.tsir. no.105:13 S '50. (MLRA 6:8)
(Auroras)

TAYFEL', V.

Auroras

More about the aurora polaris of 28 October, 1951. Astron. tsir. No. 123, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952 ~~1953~~, Uncl.

1. TEYIFEL, V.

2. USSR (600)

4. Meteors

7. Observations of Lyraids made in 1952 in Gorkiy. Astron. tsir., No. 128, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, May 1953. Unclassified.

CHISTYAKOV, V.F.; TEYFEL', V.G.

Visible boundary of noctilucent clouds. Astron.tsir. no.139: 9-12 Je '53. (MLRA 7:1)
(Clouds)

TEYFEL', V.G.

Meteor "swarms." Astron.tsir. no.138:11 My '53. (MLRA 7:1)
(Meteors--April)

TEYFEL', V.G.

Lunar eclipse of January 29, 1953. Astron.tsir. no.135:18-19 F '53.
(MLRA 6:6)

1. Shcherbakovskaya Astronomicheskaya Observatoriya.
(Eclipses, Lunar - 1953)

TEYFEL', V.G.

Aids in the study of astronomy. Fiz. v shkole 13 no.4:74-75 Jl-Ag '53. (MLRA 6:6)

1. Vsesoyuznoye Astronomo-Geodezicheskoye obshchestvo Gor'kiy.
(Astronomy--Study and teaching)

TSYFEL', V.G.

Noctilucent clouds in 1953. Astron.tsir. no.142:12-14 S '53.
(MLRA 7:7)

1. Gor'kovskoye otdeleniye VAGO.
(Clouds)

TEYFEL', V.G.

Aurora borealis seen from Gorkiy. Astron.tsir. no.144:18 D '53.
(MLRA 7:6)

1. Gor'kovskoye otdeleniye VAGO.
(Auroras)

TEYFEL', V.G.

Noctilucent clouds in 1954. Astron.tsir. no.154:16-17 N '54.
(MLRA 8:6)

1. Gor'kovskoye otdeleniye VAGO.
(Clouds)

TEYFEL', V.G.

TEYFEL', V.G.

Observations of noctilucent clouds. Astron.tsir. no.149:25 My '54.
(MLRA 7:7)

1. Gor'kovskoye otdeleniye VAGO.
(Clouds)

TEYFEL, V. G.

Visible border of noctilucent clouds. V. F. Chistyakov and V. G. Teifel. *Astron. Tsirkulyar* 1954, No. 145, 15–17; *Referat. Zhur., Astron. i Geodez.* 1955, No. 2010.—If the upper border of the apparent height of noctilucent clouds is detd. by the action of ultraviolet radiation from the sun and the screening effect of an O_3 layer, then the height of the effective O_3 layer depends on the phase of the solar activity cycle. During the period of max. solar activity, the disintegration of O_3 mols. under the effect of radiation of the wave-length range 2200–3100 A. is greater in the terrestrial atm. than in a period of min. activity. Radiation of 1300–1850 A. penetrates more deeply, forming at. O. Thus, the height of the O_3 layer decreases in the period of max. solar activity and increases in the period of min. activity, and does not remain at a height of 30 km., as was thought earlier. The height of the O_3 layer is calcd. by the formula: $H(\pm\Delta) = 30 \pm n$, $n = 816.66 \sin \Delta$ km., where n is the variance in height of the effective O_3 layer from the 30 km. level; parameter Δ is found from the table published earlier (*Referat. Zhur., Astron.* 1953, No. 1347). In the year of max. solar activity, $\bar{\Delta} = -40'$; in the year of min. activity, $\bar{\Delta} \simeq +1°$; corresponding heights of the O_3 layer are 20 and 45 km. Sometimes in the period of min. solar activity the angular heights of the upper border of noctilucent clouds better satisfy the hypothesis of "a ray, tangent to the earth's surface." Anomalous cases are discussed, when two borders of noctilucent clouds are observed, one over the other, during min. solar activity. The lower border satisfies the hypotheses of the screening of ultraviolet radiation by an O_3 layer; the upper border satisfies the hypothesis of "a ray, tangent to the earth's surface." Thus, for noctilucent clouds the connection between $\bar{\Delta}$ and W, Wolf's no., is in all probability the connection between the height of the effective O_3 layer and solar activity. Marjorie Ketner

MARTYNENKO, V.V.; PLAKHOV, Yu.V.; TEYFEL', V.G.

Lyrids in 1952. Biul.VAGO no.16: 28-33 '55.
(MLRA 8:6)

1. Moskovskoye otdeleniye VAGO, meteornyy otdel; Gor'- kovskoye otdeleniye VAGO, sektsiya nablyudateley; Simferopol'skoye otdeleniye VAGO, Meteornaya stantsiya imeni G.O. Zateyshchikova pri Krymskoy stantsii yunikh tekhnikov.
(Meteors--April)

TEYFEL', V.G.

Reduction coefficients for photometric observations of noctilucent clouds. Astron.tsir. no.159:25-27 My'55. (MLRA 8:12)

1. Gor'kovskoye otdeleniye Vsesoyuznogo astrono-geodezicheskogo obshchestva
(Photometry, Astronomical) (Clouds)

TEYFEL', V.G.

CHISTYAKOV , V.F. (Kaliningrad); TEYFEL', V.G. (Gor'kiy)

Nature of noctilucent clouds. Biul. VAGO no.19:17-30 '56.
(MLRA 10:3)

(Clouds)

TEYFEL', V.G.

Noctilucent clouds. Nauka i zhizn' 23 no.7:49-50 Jl '56.
(Clouds) (MLRA 9:9)

TEYFEL', V.G.

Observations of the partial lunar eclipse of November 29, 1955.
Astron.tsirk. no.168:21-22 '56. (MLRA 9:5)

1. Sektor astrobotaniki AN Kaz.SSR, Alma-Ata.
(Eclipses, Lunar--1955)

TEYFEL', V.G.

Noctilucent clouds in 1955. Astron.tsirk. no.168:23 '56.
(MLRA 9:5)

1. Sektor astrobotaniki AN Kaz.SSR, Alma-Ata.
(Clouds)

TEYFEL', V.G.

Noctilucent clouds. Trudy Sekt. astrobot. AN Kazakh. SSR 5:59-82 '57.
(Clouds) (MLRA 10:6)

66865
SOV/35-59-9-7244

B. 1520

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 60 (USSR)

AUTHORS: Teyfel', V.G., Teyfel', Ya.A.

TITLE: A Trial Spectrophotometry of Saturn

PERIODICAL: Astron. tsirkulyar, 1958, Jan 11, Nr 188, pp 14 - 16

ABSTRACT: At the Observatory of the Sector of Astrobotany AS KazSSR, in June 1957, the spectra of sections of Jupiter and Saturn were obtained with the aid of an AZT-7,8 telescope, a magnifying camera and an ASP-9 spectrograph. The width of the spectrum of Saturn and its ring equalled 2 mm. The microphotograms were measured on the MF-4 apparatus within the limits from 400 - 590 m μ at 10 m μ intervals. Tables are given of the ratios of monochromatic intensities of the ring and edges of the disk to the intensity of the center and the ratios of the intensities of the brightest zone of the ring to the intensity in the center in different rays. The absolute values of the color indices of the same sections of the planet and its ring were obtained by comparing them with the η Oph spectrum. The obtained data are contained within the limits from $+0^m.76$ (E - the ring), and $+1^m.28$ (center of the disk).

I.I. Lebedeva

Card 1/1

3.1520
3.1550

69867
SOV/35-59-9-7249

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 61 (USSR)

AUTHOR: Teyfel', V.G.

TITLE: On the Normal Color Indices of Lunar Objects

PERIODICAL: Astron. tsirkulyar, 1958, May 26, Nr 192, pp 21 - 23

ABSTRACT: The spectrograms of the Moon obtained during 1957 - 1958, were measured on the MF-4 microphotometer across the dispersion at wavelengths of 550 and 443 mμ. By comparing to the spectrum of α Aur a catalogue of normal color indices of 262 small sections of the lunar surface has been compiled. Each value of CI is based on the measurements of 10 - 14 spectrograms. The color indices are contained within the limits $+0^m.76$ - $+0^m.97$, their mean value is $+0^m.85$, the mean yellowness index is $+0^m.28$. The relation between the color and brightness of lunar objects is confirmed.

N.P.K.

Card 1/1

69868
SOV/35-59-9-7250

3.1550

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 61 (USSR)

AUTHOR: Teyfel', V.G.

TITLE: On the Color-Versus-Brightness Relation for Sections of the Lunar Surface

PERIODICAL: Astron. tsirkulyar, 1958, August 26, Nr 194, pp 11 - 13

ABSTRACT: The spectra of Mare Serenitatis and Mare Tranquillitatis, obtained with a high slit, were measured in 11 sections relatively to the reference point located in Mare Serenitatis. The color excesses, CE, and the relative brightnesses, lgJ_{500}, of these sections are given. All the data, with the exception of 4 values for the Sea of Brightness, confirm the correlation of CR to lgJ_{500} which was established earlier by the author. It is shown that the relation is satisfactorily represented by theoretical curves, obtained under the assumption that the connection between the color and the brightness is caused by the merging in different proportions of two substances, each possessing a different color and brightness. The most probable explanation for the existence of the color-versus-brightness relation on the lunar surface is the assumption that originally, the whole crust of the Moon consisted mainly of bright, reddish and possibly acid rocks. With the

Card 1/2

On the Color-Versus-Brightness Relation for Sections of the Lunar Surface

formation of the seas, the eruptions of dark lava flooded the remains of the crust, and fusing with the bright substance, formed sections with different reflecting and polarizing capacities and of a different color. Thus the color-versus-brightness relation is probably connected with the inner processes.

N.B. Perova

4

Card 2/2

69869
SOV/35-59-9-7254

3.1520
Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, pp 61 - 62 (USSR)

AUTHOR: Teyfel', V.G.

TITLE: The Spectrophotometry of Vesta

PERIODICAL: Astron. tsirkulyar, 1958, September 18, Nr 195, pp 3 - 5

ABSTRACT: Spectrograms were obtained during April - June 1956, on the Bredikhin astrograph with a lens prism of $\varphi = 13^{\circ}$. A spectral curve of the Vesta was plotted in relation to a star of the G0 class from the 4 best negatives obtained in April. For each negative a spectrophotometric gradient of Vesta in relation to a A2 star was determined for an interval of 380 - 500 mμ. An explicit change of the magnitude of the gradient of Vesta at $\lambda\lambda > 500$ mμ was observed. The gradient of Vesta in relation to a F5 star in the interval from 380 - 460 mμ obtained on July 13 - 14, 1956, for a whole series of spectrograms, systematically decreased from 1.57 to 0.76. The length of time during which the gradient diminished (3 hrs) is near to half the period

Card 1/2

The Spectrophotometry of Vesta

69869
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of the fluctuation of luminosity. The spectrum of Vesta is characterized by a maximum intensity at about λ 480 mμ and by the decrease in intensity towards the violet and especially towards the red edge of the spectrum.

M.V. Savel'eva

Card 2/2

SOV/35-59-9-7251

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 61 (USSR)

AUTHOR: Teyfel', V.G.

TITLE: On Spectral Differences Between the Sections of the Lunar Surface

PERIODICAL: Astron. tsirkulyar, 1958, October 16, Nr 196, pp 5 - 6

ABSTRACT: From the spectrograms of the Moon obtained by the Sector of Astrobotany of the AS KazSSR, spectral curves of 90 sections of the lunar surface have been plotted in relation to the reference section in Mare Vaporum. The spectrophotometric gradients at λλ 390 - 620 mμ are given of the most characteristic morphological groups of lunar formations: sea regions, continents, mountain formations, craters, rays and aureoles of the craters. The existence of the color-versus-brightness relation is confirmed for the lunar surface.

N.P.K.

Card 1/1

Teyfel, V.G.

PHASE I BOOK EXPLOITATION SOV/4302

Akademiya nauk SSSR. Komissiya po fizike planet

Izvestiya, vyp. 1 (News of the Commission on the Physics of Planets, No. 1) Khar'kov, 1959. 108 p. 1,000 copies printed.

Editorial Board: N.P. Barabashov, Academician of the Academy of Sciences Ukrainskaya SSR (Resp. Ed.); V.I. Yezerskiy, Candidate of Physics and Mathematics (Secretary); A.V. Markov, Professor; Yu. N. Lipskiy, Candidate of Physics and Mathematics; and A.T. Chekirda, Candidate of Physics and Mathematics; Ed.: D.A. Vaynberg; Tech. Ed.: A.S. Trofimenko.

PURPOSE: This publication is intended for astrophysicists and astronomers.

COVERAGE: This collection of articles constitutes the first issue of a new journal on problems in planetary physics. The first six articles discuss the surface features, polarimetry, and spectrophotometry of the Moon. The remaining articles deal with the physics of Mars, Jupiter, and the asteroids. No personalities are mentioned. References accompany individual articles.

AVAILABLE: Library of Congress

Card 3/3

JA/dwm/mas
10-20-60

TEYFEL', V.G.

Distribution of intensity on Jupiter's disk in methane absorption bands. Izv.Kom.po fiz.plan. no.1:93-104 '59.
(MIRA 13:7)

(Jupiter(Planet)--Spectra)

TEYFEL', V.G.; TEYFEL', Ya.A.

Experience in the spectrophotometry of Saturn. Trudy Sekt. astrobot.AN Kazakh SSR 7:64-68 '59. (MIRA 13:5)
(Saturn(Planet)--Spectra)

TEYFEL, V.G.

Spectrophotometry of the moon's surface. Trudy Sekt.astrobot. AN Kazakh SSR 7:69-83 '59. (MIRA 13:5)
(Moon--Spectra)

KUPO, I.D.; TEYTEL', V.G.

Some results of observations of Arend-Roland's comet 1956 h.
Trudy Sekt.astrobot.AN Kazakh SSR 7:93-107 '59.
(MIRA 13:5)

(Comets--1956)

`TEYFEL', V.G.

Color index of Mars during the opposition of 1958. Astron.tsir. no.202:1 Je '59. (MIRA 13:4)

1. Sektor astrobotaniki AN KazSSR, Alma-Ata.
(Mars(Planet))--Opposition, 1958)

TEYFEL', V.G.

Color index of Mars during the 1958 opposition. Astron.tsir. no.204:10-11 S '59. (MIRA 13:6)

1.Sektor astrobotaniki AN KazSSR.
(Mars (Planet)--Opposition, 1958)

3,2300
3,1550

83442
S/035/60/000/007/012/018
A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 7, p. 77, # 6452

AUTHOR: Teyfel', V.G.

TITLE: On Spectral-Polarization Properties of Lunar Surface

PERIODICAL: Astron. tsirkulyar, 1959, okt. 15, No. 205, pp. 7-8

TEXT: During June-July 1959, the author took 108 spectrograms of 12 sections of the Moon with a 220-mm AST-7 (AZT-7) telescope near quadratures. In taking the spectrograms, the polaroid, mounted in front of the spectrograph slit, was placed in three positions (position angles: 0°, 60°, 120°). Monochromatic values of polarization degree P_λ were calculated by V.G. Fesenkov's formula (Astron. zh., 1935, Vol. 12, No. 4, p. 309). The P_λ -values decrease with an increase of wavelengths. In the range $\lambda\lambda$ 420-620 mμ the decrease amounts to 5-7%. The P_λ -value in the spectra of lunar formations varies in

Card 1/2

On Spectral-Polarization Properties of Lunar Surface

correspondence with the monochromatic values of their albedo, obeying the same empirical relationship as the polarization in integrated radiation.

V.P. Fedorovich

Translator's note: This is the full translation of the original Russian abstract.

TAFEL', V. ., Zam Phys-Math Sci -- (diss) "Spectrophotometry of the moon's surface," Leingrad, 1960, 10 pp, 250 cop. (Main Astronomical Observatory, AS USSR) (KL, 45-60, 122)

PHASE I BOOK EXPLOITATION SOV/5645

Teyfel', V. G.

Spektrofotometriya poverkhnosti luny; avtoreferat dissertatsii na soiskaniye uchenoy stepeni kandidata fiziko-matematicheskikh nauk (Spectrophotometry of the Surface of the Moon; Author's Abstract of a Dissertation Leading Towards a Degree of Candidate of Physics and Mathematics) Leningrad, 1960. 9 p. 250 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Glavnaya astronomicheskaya observatoriya.

No contributors mentioned.

PURPOSE : This booklet is intended for astronomers and astrophysicists.

COVERAGE: The booklet is an outline and resumé of the author's dissertation on the spectrophotometry of the lunar surface. The author conducted spectrophotometric and spectrocolorimetric studies of specific areas and objects on the moon's surface.

Card 1/2

Spectrophotometry of the Surface (Cont.) SOV/5645

whose spectral curves and color properties were investigated. The content of each chapter of the original dissertation is briefly discussed. Their topics are as follows: Ch. I - selenographic and optical studies; Ch. II - colorimetry and spectrophotometry of the moon; Ch. III - photographic registration of the spectrophotometry of the lunar surface; Ch. IV - quantitative determinations of normal indicators of color of a large number of small areas on the moon's surface; Ch. V - spectrograms of lunar details along the line of dispersion; Ch. VI - discussion of the results obtained. A conclusion and a supplement (containing a catalog of the normal indicators of color of 262 lunar details and a catalog and atlas of spectral curves of 90 units of the lunar surface) follow the chapters. The work was performed at the Sektor astrobotaniki Akademii nauk Kazakhskoy SSR (Astrobotanical Sector of the Academy of Sciences Kazakhskaya SSR). No personalities are mentioned. There are 9 references to articles by the author which contain the results of this work.

TABLE OF CONTENTS: None given.

AVAILABLE: Library of Congress (QB591.T4)

Card 2/2

JA/rsn/jw
10-17-61

TEYFEL, V. G.

"Color And Spectral Properties Of The Lunar Surface."

paper presented at IAU Symposium on the Moon, Leningrad, USSR, 6-8 Dec. 60.

The following conclusions may be made from a spectral photometric study of 90 areas of the lunar surface.
(1) The intensity of the majority of objects varies smoothly with wavelength. Therefore the differences can be characterized uniquely by the color index or color excess.
(2) The color differences on the lunar surface do not exceed $0^{m}.25$ in units of CI.
(3) The formations show a color-brightness dependence. The dependence gradients and correlation coefficients for different areas of the Moon are given.
(4) The noted dependence is apparently a result of the tectonic evolution of the Moon, during which the initial lunar crust collapsed and the material of the crust was melted in different proportions with the darker greenish lava.

35247
S/035/62/000/002/020/052
A001/A101

3.1520 (1114, 1057)

AUTHOR: Teyfel', V. G.

TITLE: Some results of spectrophotometry of Uranus

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 2, 1962, 55-56, abstract 2A471 ("Tr. Sektora astrobotan. AN KazSSR", 1960, v. 8, 76-80)

TEXT: Spectrograms were obtained in 1956-1958 at the observatory of the Section of Astrobotany by means of an АЗТ-7 (AZT-7) telescope with an АСП-9 (ASP-9) spectrograph (slit width 0.100 mm) on Agfa Spektral Rot Rapid plates. With the purpose of studying continuous spectrum and absorption bands, spectrograms П-24 (P-24) and P-42 pertaining to 1957 and 1958 respectively were processed on a МФ-4 (MF-4) microphotometer. Comparison stars were β Leonis and γ Geminorum. Intensity distribution in the Uranus spectrum relative to these comparison stars is presented in the table. Using these data the values of Uranus color index were calculated for two systems of λ ranges: visible CI_V, i. e. containing the effect of absorption bands, and true CI_T (expressing energy distribution in the continuous spectrum beyond the bands). See the table:

Card 1/2

Some results of spectrophotometry of Uranus

S/035/62/000/002/020/052
A001/A101

Ranges of spectrum (mμ)		540 - 560 430 - 450	536 - 576 420 - 460
CI_T	P-24	+ 1.00	+ 1.01
	P-42	+ 0.75	+ 0.77
CI_V	P-24	+ 0.64	+ 0.46
	P-42	+ 0.42	+ 0.40

The difference between CI_T and CI_V expresses the effect of methane absorption bands which change the color of the planet toward the blue. The cause of the difference between the negatives of P-24 and P-42 is not clear. Contours are plotted for methane absorption bands λλ 6190, 5970, 5760 and 5430, and equivalent widths are calculated with allowance for dispersion, both in a rigorous way and assuming its mean values. The CH_4 band λ 5970 is distinctly divided into 3 components, since it represents the result of superposition of several vibrational bands. There are 5 references.

I. Lebedeva

[Abstracter's note: Complete translation]

Card 2/2

TEYFEL' V.G.

Spectrophotometry of the moon's surface. Pt.2: Catalog of color indices of lunar objects. Trudy Sekt. astrobot. AN Kazakh. SSR 8: 130-151 '60. (MIRA 13:12)

(Moon—Spectra)

TEYFEL', V.G.

Spectrophotometry of the moon's surface. Pt.3: Differences in the spectral properties of lunar formations. Trudy Sekt. astrobot. AN Kazakh. SSR 8:152-164 '60. (MIRA 13:12)
(Moon--Spectra)

S/035/62/000/002/021/052
A001/A101

3,2500 (also 1080)

AUTHOR: Teyfel', V. G.

TITLE: Some considerations on the state of the lunar surface

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 2, 1962, 56, abstract 2A477 ("Tr. Sektora Astrobotan. AN KazSSR", 1960, v. 8, 165-170)

TEXT: The author advances a hypothesis according to which the color-brightness relationship observed on the Moon is a result of both exogenous processes, consisting in the fusion of different rocks, and a subsequent superposition of the products of re-making of the lunar surface acted upon by meteorites and other exogenous factors. The following simplifying assumptions are made: continents and mountainous regions on the Moon are composed mainly of acid rocks, and maria of dark basic rocks; the substance which arises under the action of meteorites represents a combination of the original rock and some additional substance which is the same for continents and maria. Optical properties of the lunar surface are calculated with these data, and the results obtained are compared with observational results. This leads the author to the

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A001/A101

conclusion that the lunar rocks could have been similar in optical properties with terrestrial acid and basic magnatic rocks only in early historical periods. During the subsequent periods of the lunar history, differences in brightness and color of the original lunar surface have been obliterated by the action of endogenous processes. The effect of meteorites and other exogenous factors led to a further reduction of brightness-color contrasts and to the appearance of the reddish hue characteristic of the entire lunar surface. There are 9 references.

I. Lebedeva

[Abstracter's note: Complete translation]

S/035/62/000/002/022/052
A001/A101

AUTHOR: Tevfel' V. G.

TITLE: Spectrophotometry of asteroids Vesta (4) and Eunomia (15)

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 2, 1962, 57, abstract 2A486 ("Tr. Sektora astrobotan. AN KazSSR", 1960, v. 8, 171-175)

TEXT: In April – July 1956, 24 spectrograms of the asteroid Vesta were obtained in Alma-Ata on a Bredikhin astrograph with the objective prism UV (φ = 13°) on the plates: Agfa Astro Panchromatisch, Agfa Isopan ISS and Agfa Spektral Rot Rapid with exposures from 15 to 60 min. Spectrophotometric tying was made on the basis of 3 images of stars of approximately the same magnitude, belonging to classes A2, G0 and F5. For the range from $\lambda\lambda$ 380 to 500 mμ the author obtains mean values of the relative spectrophotometric gradient of Vesta relative to the A2 star, $\bar{g}_{VA}$ =+1.73 ± 0.07, and relative to the G0 star $\bar{g}_{VG}$ = +0.39 ± 0.04. In the spectrum section $\lambda > 500$ mμ, $g_{VA} \approx 0$. During the night from 13 to 14 June, 1956, 7 spectrograms of Vesta with exposures of 15 min and 15-min pauses were obtained on one negative, with the purpose of detecting

Card 1/2

S/035/62/000/002/022/052
A001/A101

Spectrophotometry of asteroids ...

possible short-periodic color variations. The spectrophotometric gradient relative to the F5 star, shown in the table, reveals a gradual decrease with time (during 3 hours) from 1.57 to 0.76. The spectral curve of Vesta, plotted according to the four April negatives, is represented by a drawing and a table. The spectrum of Vesta is characterized by an intensity peak near λ 480 mμ and reduction of intensity to the violet and especially to the red end. The results obtained are compared with those of other investigators. Spectrophotometric gradients in the range from $\lambda\lambda$ 400 to 520 mμ relative to the A0 star were determined from two spectrograms of the asteroid Eunomia obtained in 1955 with 2-hr exposure. The spectral curve of Eunomia relative to the G0 star was plotted on the basis of two observations. The color index of Eunomia, determined from the A0 star, is + $0^m.57 \pm 0^m.02$, and from the G0 star it is + $0^m.54 \pm 0^m.02$. There are 6 references.

I. Lebedeva

[Abstracter's notes: Complete translation]

Card 2/2

TEYFEL', V.G.

Color contrasts on the lunar surface in the visible spectrum. Vest.AN Kazakh.SSR 16 no.2:77-84 F '60. (MIRA 13:6)

(Moon)

31550 1057 1062

83232

S/033/60/037/004/008/012
E032/E314

AUTHOR: Teyfel', V.G.

TITLE: Spectropolarimetry of some Parts of the Solar Surface

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol. 37, No. 4, pp. 703 - 708

TEXT: Spectrograms of two regions on the lunar surface were obtained in June and July, 1959, near quadrature.. The 200 mm telescope AZT-7 was used in conjunction with the ASP-9 spectrograph, in which a polaroid plate was placed in front of the slit. The polaroid could be rotated and the spectra were recorded with the polaroid in three positions, namely, φ = 0, 60 and 120°, respectively. The degree of polarisation was determined from Fesenkov's formula given by Eqs. (1) and (2), where I_1, I_2 and I_3 are the intensities corresponding to the three positions of the analyzer. The degree of polarisation was measured as a function of wavelength. Altogether 108 spectrograms of twelve regions on the lunar surface were obtained. The coordinates of the regions are given in Table 2. The monochromatic values of

Card 1/3

83232

S/033/60/037/04/008/012
E032/E314

Spectropolarimetry of Some Parts of the Solar Surface

the degree of polarisation and the polarisation angle which were obtained from these spectrograms are given in Tables 3 and 4. Figs. 1 and 2 give the monochromatic degree of polarisation as a function of wavelength for the regions listed in Table 2. It was found that the monochromatic polarisation has a definite tendency to decrease with increasing wavelength. The decrease in the degree of polarisation is, on the average, 0.04 - 0.06 in the region 400 - 600 mμ. The variation of polarisation with wavelength is due mainly to the dependence of polarisation on the monochromatic albedos of lunar formations. The polarisation obtained in the various regions in the spectrum can, to some extent, be influenced by the luminescence of lunar material. Calculations show that this effect can reduce the degree of polarisation in some parts of the spectrum by 0.02 - 0.05. However, the systematic change in polarisation is largely due to the variation in the albedo with wavelength.

Card 2/3

83232

S/033/60/037/004/008/012
E032/E314

Spectropolarimetry of Some Parts of the Solar Surface

There are 2 figures, 4 tables and 13 references: 2 German, 2 French, 1 Czech, 1 English and 7 Soviet.

ASSOCIATION: Sektor astrobotaniki Akademii nauk KazSSR
(Astrobotany Division of the Ac.Sc., KazSSR)

SUBMITTED: October 3, 1959

Card 3/3

TEYFEL', V.G.

Color-brightness dependence for 62 regions of the lunar surface near the epoch of full moon. Astron.tsir. no.209:10-12 Mr '60. (MIRA 13:9)

1. Sektor astrobotaniki AN KazSSR, Alma-Ata.
(Moon--Surface)

88828

S/035/61/000/002/013/016
A001/A001

3,1550 (1057, 1062, 1129)

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1961, No. 1, p. 59, # 2A482

AUTHOR: Teyfel', V.G.

TITLE: Intensity of Absorption Bands of CH_4 at 6190 A in Jupiter Spectrum in 1959

PERIODICAL: "Astron. tsirkulyar", 1960, No. 210, apr 15, pp. 11 - 14

TEXT: In 1959 the author obtained 210 spectrograms of Jupiter with an aim of studying latitude differences in the equivalent width W_n of band CH_4 at λ 6190 found by Hess in 1953 (RZhAstr, 1954, No. 2, 2296). The results of the present study do not confirm Hess's results. The mean W_Π = 18.2 A with deviations for different zones of ± 2 A and the root-mean-square deviation within each zone of ± 1.8 A. The author studied zones from +10° to -10° and from ± 30° to ± 60° of latitude. The mean depth in the band center R_Π = 0.206. If the observed time variations of W_Π are assumed to be real (within 16-21 A), then the optical and linear thickness of the gaseous layer varies by about 2 times, which

Card 1/2

88828

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A001/A001

Intensity of Absorption Bands of CH_4 at 6190 A in Jupiter Spectrum in 1959

can be explained by oscillations in altitude of the Jupiter cloudy layer. This hypothesis does not contradict the assumption on the existence on Jupiter of a thin gaseous layer above the cloudy layer, expressed by N.P. Barabashov (RZh-Astr, 1958, No. 11, 7429).

V. Bronshten

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

TEYFEL', V.G.

Spectrophotometry of the equatorial region of Jupiter in 1959.
Astron.tsir. no.215:7-9 O '60. (MIRA 14:3)

1. Sektor astrobotaniki AN KazSSR, Alma-Ata.
(Jupiter(Planet))

TEYFEL', V.G.

Spectrocolorimetric characteristics of the lunar Aristarchus Crater system. Astron. tsir. no.215:9-11 O '60. (MIRA 14:3)

1. Sektor astrobotaniki AN KazSSR, Alma-Ata.
(Moon—Surface)

38022
S/035/62/000/006/040/064
A001/A101

3.2500

AUTHOR: Teyfel', V. G.

TITLE: Color properties of the lunar surface according to observations close to true full moon

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 6, 1962, 64, abstract 6A483 ("Izv. Komis. po fiz. planet", 1961, no. 3, 56 - 67)

TEXT: Normal color indices of 1,442 sections of the lunar surface were determined on the basis of spectrograms of 62 regions of the Moon obtained on September 16 - 17, 1959, at phase angles from $4^{\circ}33'$ to $3^{\circ}46'$. With allowance for random errors the amplitude of differences in color indices turns out to be not more than $0^{m}.25$. The existence of a color-brightness relation for features of the lunar surface is confirmed. There are 8 references.

Author's summary

[Abstracter's note: Complete translation]

Card 1/1

21899
S/026/61/000/006/002/003
D045/D114

3, 1550 (1057, 1129)

AUTHOR: Teyfel', V.G.

TITLE: Planetary spectra

PERIODICAL: Priroda, no.6, 1961, 39-45

TEXT: This article deals with the application and results of spectroscopic investigations of the planets. The author, in dealing with investigations of the presence of carbon dioxide and water vapor in the atmosphere of Venus, refers exclusively to American research in this field. In 1953, N.A. Kozyrev found two absorption bands of an unknown molecule in the violet range of the Venus spectrum at 4120 and 4372 Å wavelengths. Subsequent observations showed that this molecule is also contained in the earth's atmosphere. Whilst photographing spectra of the night side of Venus with the aid of a 50-inch reflector at the Krymskaya astrofizicheskaya observatoriya (Crimean Astrophysical Observatory) he noticed for the first time weak emission bands on the limb of the night side of the disk. These bands were identical to the nitrogen emission bands observed in the spectra of the earth's aurora. The existence of several of these bands was substantiated by the findings of the astronomer G. Newkirk in 1958. Their intensity indicates that the nocturnal glow on Venus is 50-80 times brighter than that on the earth. G.A. Ti-

Card 1/4

21899
S/026/61/000/006/002/003
D045/D114

Planetary spectra

khov, Head of the Sector of Astrobotany of the Academy of Sciences of the Kazakhskaya SSR and his associates have demonstrated that under the severe climatic conditions on Mars plants can absorb infrared rays. The chlorophyll band becomes wider but less noticeable and is the same as the spectra of terrestrial plants under conditions of low temperatures. New data in favor of the hypothesis on the existence of plant life on Mars were recently obtained in the USA. In discussing the presence of hydrogen and its compounds in the atmospheres of Jupiter, Saturn, Uranus and Neptune, the author refers to American research and states that N.T. Bobrovnikov's, D.I. Yeropkin's and his own observations confirm those by S.Hess (USA), viz. the intensity of the methane bands does not increase towards the edges of Jupiter's disk. Calorimetric and spectrophotometric observations on the moon's surface are now being carried out by N.P. Barabashov, Y.I. Yezerskiy and V.A. Fedorets in Khar'kov, V.V. Sharonov in Leningrad, A.N. Sergeyeva in Kiyev, T.A. Polozhentseva in Pulkovo and the author in Alma-Ata. Lunar rocks differ less by their spectral properties than the terrestrial granite and basalt-type rocks. The brighter details on the moon's surface are more reddish, and their color and relative brightness are proportionally interdependent. The brightness in the moon's spectra increases with the transition from short to long waves. The degree of polarization of lunar details slightly changes with the wavelength of reflected sunlight and increases towards the blue end of the spectrum. This phenomenon is well

Planetary spectra

explained by N.A. Umov's effect, i.e. by the degree of polarization depending on the brightness of the surface which scatters the light in different wave lengths. Investigations of the spectral-polarization properties of lunar objects, although only just beginning, seem useful for explaining the composition of lunar rocks. Increased brightness of lunar details during an eclipse are explained by the Czechoslovakian astronomer F. Link as being caused by luminescence of some parts of the moon, due to the action of ultraviolet solar radiation. According to N.A. Kozyrev, luminescence on the moon's surface may be caused by currents of solar corpuscles. He found that the brightness and luminescence of the crater Aristarch differed markedly from that of the surrounding lunar surface. This indicates the presence of a special substance in the crater. Moreover, the author recently noticed in this crater a deviation from the interdependence between color and brightness common to all the other sections in this part of the moon. In 1958, Kozyrev and V.M. Yezerskiy, whilst making spectral observations, found that gas is liberated from the central peak of the crater Alphons. N.T. Bobrovnikov, according to microphotograms of 12 asteroids, established that they have no trace of gases and that the distinctions in their spectral reflecting power are fairly large. A.N. Deych in Pulkovo obtained a spectrogram of the asteroid Vesta, on which he determined that the violet part of the spectrum was actually weakened compared with the spectra of sun-

Planetary spectra

type stars. The observations of Bobrovnikov, the author and others also seem to indicate that Vesta periodically changes its color in accordance with the period in which it changes its brightness. Calorimetric observations of the asteroids have shown that their color varies greatly. In summing up, the author speaks of numerous problems of planetary astrophysics still to be solved by spectral methods and mentions that, to expedite their solution, new, powerful telescopes equipped with spectral apparatus will shortly be put into operation in the USSR. There are 1 Soviet-bloc reference and 6 figures.

ASSOCIATION: Akademiya nauk Kazakhskoy SSR (Academy of Sciences of the Kazakhskaya SSR), Alma-Ata.

TEYFEL', V.G.

Noctilucent clouds observed in Central Asia. Astron.tsir. no.218:25-26 F '61. (MIRA 14:7)

1. Astrofizicheskiy institut AN KazSSR.
(Clouds)

TEYFEL', V.G.

Photometry of the continuous spectrum of the equatorial zone of Jupiter. Izv.Astrofiz.inst. AN Kazakh.SSR 13:54-61 '62. (MIRA 15:6)
(Jupiter (Planet)--Spectra)

44274
S/503/62/015/000/001/003
A001/A101

3,2500

AUTHOR: Teyfel', V. G.

TITLE: On distribution of ejected substance in small haloes of lunar craters

SOURCE: Akademiya nauk Kazakhskoy SSR. Astrofizicheskiy institut. Izvestiya. v. 15, 1962, 63 - 76

TEXT: The present article represents a part of the study of haloes and ray systems of lunar craters. It describes photometric studies of small haloes of five lunar craters: Mösting A, Hipparchus C, Euclides, Abulfeda E and Gambart A. The radii of these haloes do not exceed 60 km. The underlying assumption on which this investigation is based, is that the observed distribution of brightness in the halo of ejected substance reflects, to some extent, the quantitative distribution (number of particles) and qualitative one (their optical properties) of the substance around the crater. Two best negatives of the Moon's southern hemisphere taken by N. V. Mikhaylova and the author were chosen for photometric studies. Two of the investigated haloes, those of Hipparchus C

Card 1/5

On distribution of ejected substance in...

and Gambart A, have a distinct ray structure; the craters of Abulfeda E and Euclides are surrounded by diffuse haloes without indications of a ray structure. The negatives of the lunar surface sections including the haloes of the listed craters were measured with a МФ-2 (MF-2) microphotometer and photometric maps with isophotes, in intervals of 0.05 or 0.1 units of crater intensity, were plotted. The isophotes show that the halo brightness of all investigated craters decreases smoothly toward periphery, both in red and green light. The brightness of craters turns out to be 1.5 - 3 times as high as the brightness of the brightest parts of the haloes. On the basis of the brightness distribution and assumptions made, the distribution of substance in the haloes was calculated and the curves, quantity of substance versus distance from the center, were plotted for all five craters (see Figure 2 attached). The data obtained made it possible to estimate approximately the mass of ejected substance. Assuming it to be dust-like and having the specific gravity equal to 3.33 g/cm^3 (average Moon's density), the mass of substance ejected from a crater and forming a bright halo turns out to be of the order of 100,000 tons. Assuming the mean velocity of substance ejection to be 0.2 km/sec, the energy of explosion leading to formation of haloes is calculated to amount to 10^{21} erg. However, the energy

On distribution of ejected substance in... S/503/62/015/000/001/003
A001/A101

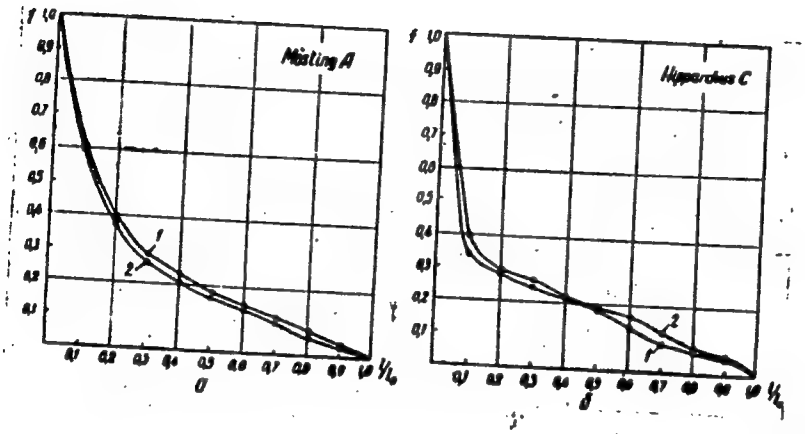
necessary for the formation of a crater amounts, according to K. P. Stanyukovich and assuming the numerical data for the craters in question, to 10^{24} erg. It means that only an insignificant fraction of substance of lunar rocks forming the walls of a crater is ejected in the form of a halo and rays. Considering conditions of ejection and comparing different versions, the author finds out that the most probable version of ejection is as follows; the substance was ejected mainly at small angles ($\varphi < 45°$) to horizon and with a small dispersion of initial velocities. The theoretical curve plotted according to these conditions shows a close agreement with the observational ones, with exception of the halo of the Hipparchus C crater. There are 5 figures and 3 tables.

Card 3/5

On distribution of ejected substance in...

S/503/62/015/000/001/003
A001/A101

Figure 2.

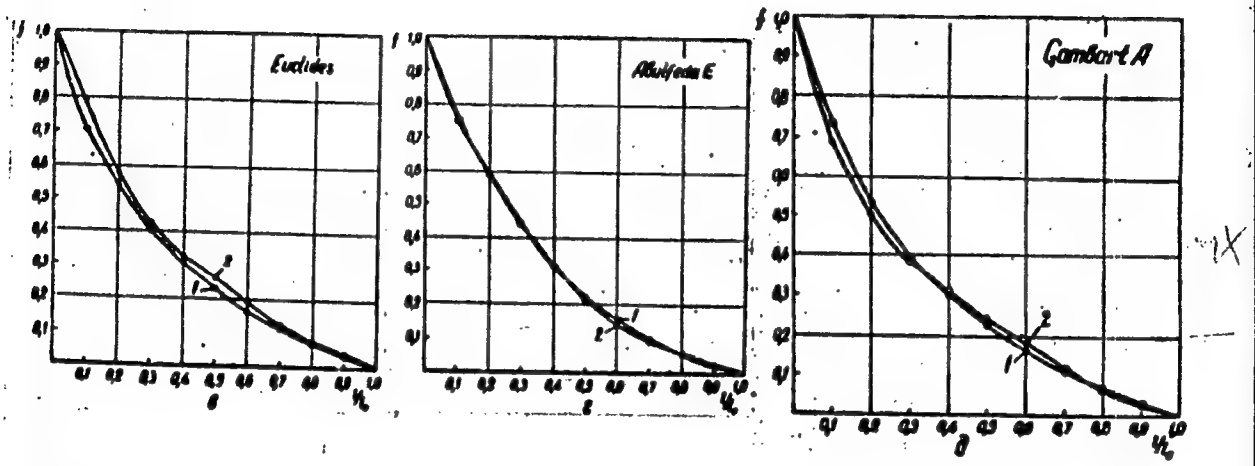


Card 4/5

On distribution of ejected substance in...

S/503/62/015/000/001/003
A001/A101

Figure 2 (cont'd)



Card 5/5

TEYFEL', V.G.

Height of the upper boundary of Jupiter's Red Spot. Astron.tsir. no.232:8-11 D '62. (MIRA 16:4)

1. Astrofizicheskiy institut AN KazSSR.
(Jupiter (Planet))

TEYFEL', V.G., kand. fiziko-matematicheskikh nauk

Lunar and planetary studies in Kazakhstan. Vest. AN Kazakh. SSR 20 no.8:9-17 Ag '64. (MIRA 17:11)

TEYFEL', V.G.

Spectrophotometry of methane absorption bands on Jupiter's disk in the near infrared region (0.7-1.0 u.). Astron. zhur. 43 no. 1:154-156 Ja-F '66 (MIRA 19:2)

1. Astrofizicheskiy institut AN KazSSR. Submitted June 18, 1965.

ACCESSION NR: AP4045062 S/0031/64/000/008/0009/0017

AUTHOR: Teyfel', V. G. (Candidate of physico-mathematical sciences)

TITLE: Investigations of the moon and the planets in Kazakhstan

SOURCE: AN KazSSR. Vestnik, no. 8, 1964, 9-17

TOPIC TAGS: moon, planet, spectrophotometry, spectrocolorimetry, atmosphere

ABSTRACT: The author points out some aspects of lunar and planetary study that need most attention at the present time. His paper is a summary of the kind of work done since 1956 at the Astrofizicheskiy institut (Astrophysical Institute) and the former Sector astrobotaniki (Astrobotanical Section) AN KazSSR. The physical properties of the moon's surface have been studied by spectrophotometric and spectrocolorimetric methods. Polarization studies of the moon's surface have revealed absorption and polarization characteristics. Photometric and spectral studies of the earth-group planets have been made, and systematic spectrophotometric and photographic investigations have been directed toward the "blue smoke" of Mars, the nature of which is not yet known. The theoretical possibility of the existence and size of magnetic fields on Mars and Venus and the possibility of radiation belts around these planets have received special attention. Detailed studies have also been made of the larger planets. Observations of continuous

Card 1/2

ACCESSION NR: AP4045062

spectra in the visible and ultraviolet regions have been made for Jupiter, Saturn, and Uranus. Present studies are of three general types, depending on the character of the object being investigated: the moon (with no atmosphere), the planets of the earth type (Mars and Venus, with atmospheres of low density), and the giant planets (with very thick, nontransparent gaseous envelopes, and with chemical compositions differing markedly from that of the earth group). The basic trend of planetary studies in Kazakhstan may be stated as the search for (and study of) inconstant phenomena and processes in the atmospheres and on the surfaces of planets and satellites of the solar system at the present stage of evolution of the system. This program also aims at a study of the connection between the indicated processes and both internal factors and solar activity.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: AA NO REF SOV: 000 OTHER: 000

Card 2/2

TEYFEL', V.G., kand.fiz.-matem. nauk

Atmospheres of distant planets. Priroda 53 no. 11:23-33 '64.
(MIRA 18:1)

1. Astrofizicheskiy institut AN KazSSR, Alma-Ata.

TEYFEL', V.G.

Photometric properties of the red spot on Jupiter. Astron. zhu. 41 no.3:531-538 My-Je '64. (MIRA 17:6)

1. Astrofizicheskiy institut AN KazSSR.

TEYGEL', V.G.; PRIBOYEVA, N.V.

Intensity of methane absorption in the band CH_4 6190 Å on Jupiter's disc. Izv. AN Kazakh. SSR. Ser. fiz.-mat.nauk no.1:61-73 '63.
(MIRA 17:4)

TNYEL', V.G.

Ultraviolet absorption in the continuous spectrum of Jupiter.
Izv AN Kazakh. SSR. Ser. fiz.-mat.nauk no.1:74-77 '63.
(MIRA 17:4)

TEYFEL', Viktor Germanovich; SKALKOVSKIY, L., red.

[What the stars tell us] O chem govoriat zvezdy. Alma-Ata, Kazakhskoe gos. izd-vo, 1964. 141 p. (MIRA 17:12)

ACCESSION NR: AP5000134 [illegible] 000/011/0023/0033

AUTHOR: Teyfel', V. G. (Candidate of physico-mathematical sciences)

TITLE: Atmospheres of distant planets

SOURCE: Priroda, no. 11, 1964, 23-33

TOPIC TAGS: planetary atmosphere, [illegible], outer planet, Jovian atmosphere

ABSTRACT: The contributions of [illegible] scientists to the problem of the composition of the atmospheres of the outer planets, with the exception of Pluto, are reviewed. [illegible] astronomers have paid much attention to photometric investigations of the cloud covers of the outer planets. Extensive [illegible] research done by N. P. Barabashov, V. V. Sharonov, [illegible] coefficients and theoretical calculations made by V. A. Ambartsumyan and V. V. Sobolev have shown that the particles composing the [illegible] around distant planets possess a marked property of continuous light absorption, which increases toward the region of [illegible] This is confirmed by spectral investigations which [illegible] increase of

Card 1/3

ACCESSION NR: AP5000134

continuous light absorption in the ultraviolet. It is not yet known whether Jupiter and Saturn have hard surfaces. According to the computations of V. G. Fesenkov and [illegible] Masevich, the pressure on Jupiter at a depth of about 0.15 radius reaches 100,000 atm: (the critical value at which the density [illegible] jumps up to 0.8). Efforts have repeatedly been made to establish the periodicity of active processes on Jupiter and the rel[illegible] processes with solar activity. B. M. Rubashev [illegible] between the variation of the brightness of Jupiter [illegible] of the velocity of the rotation of individual zones [illegible] with secular fluctuations of solar activity. [illegible] radio-wave emission, the calculations [illegible] radioastronomer, show that the oscillati[illegible] ionized atoms and stripped-free e[illegible] magnetic field of the planet cause the emission of [illegible] whose frequencies are exactly within the [illegible] figures.

ASSOCIATION: Astrofizicheskiy institut AN Kazakhskoy SSR, Alma Ata (Astrophysical Institute, AN Kazakh SSR)

Card 2/3

ACCESSION NR: AP5000134

SUBMITTED: 00	ENCL: 00	SUB CODE: AA
NO REF SOV: 000	OTHER: 000	ATD PRESS: 3148

Card 3/3

ACC NR: AP6027545 SOURCE CODE: UR/0384/66/000/003/0028/0035

AUTHOR: Teyfel', V. T. (Candidate of physico-mathematical sciences)

ORG: none

TITLE: Two new enigmas associated with the planet Jupiter

SOURCE: Zemlya i vselennaya, no. 3, 1966, 28-35

TOPIC TAGS: Jupiter planet, band spectrum, planetary astronomy

ABSTRACT: Two phenomena observed on Jupiter which have no satisfactory explanation are described. The first was observed by US astronomer Spinrad in 1961, who discovered that the slope of lines in the ammonia band with a wavelength of 6450 Å is substantially less than what would have been expected. Possible explanations for this phenomena proposed by various scientists are discussed and evaluated. The second unexplained phenomena is associated with temperature elevations on regions of Jupiter which are shaded by two of its satellites. Two physical explanations which have been proposed for this phenomenon are analyzed by the author. The first explanation attributes the phenomenon to variations in the transmission properties of the atmosphere for thermal radiation. The second explanation is based on the proposition that there is an increase in the concentration of matter which is relatively opaque to thermal radiation. The author shows that both of these explanations contain contradictions and concludes that the phenomenon is not yet properly explained. Orig. art. has: 8 figures.

SUB CODE: 03/ SUBM DATE: none

Card 1/1

TOROPOVA, T.P.; TEYFEL', Ya.A.

Measurement of solar aureoles at various elevations above sea level. Izv AN Kazakh. SSR. Ser. fiz.-mat.nauk no.1:93-102 '63. (MIRA 17:4)